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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/981,820

Applicant(s)

ONNO, PATRICE

Examiner

Dennis Rosario

Art Unit

2621

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on amt. 2/7/2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-41 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-41 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 October 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2/7/2005
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. The amendment was received on February 7, 2005. Claims 1-41 are pending.

Claim Objections

2. Due to the amendment, the objection to claim 5 is withdrawn.
3. The following quotations of 37 CFR § 1.75(a) is the basis of objection:
 - (a) The specification must conclude with a claim particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention or discovery.
4. Claims 17,30 and 31 are objected to under 37 CFR § 1.75(a) as failing to particularly point out and distinctly claim the subject matter which the applicant regards as his invention or discovery.

Claims 17 and 31 have the phrase "the blocks of samples" which has no antecedent basis and ought to be amended to "sample blocks" for a better understanding of the claim with respect to claims 16 and 30. Note that sample blocks is understood to be the same as blocks of samples.

Claim 30, lines 5 and 6 has the phrase "wherein said processing device" corresponds to either line 1 "Device" or line 2 "device" of claim 30.

A suggestion is to amend "wherein said processing device" to "wherein said **second** processing device" so that second processing device corresponds to "a device" of line 2.

Additionally a comma should be inserted between the words "signal which" to clear any confusion between the "Device" of line 1 and "device" of line 2 of claim 30.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 36-39 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 36,37,38,39 has the phrase "making it [a computer program] possible to implement the processing method of claim". The word "possible" can be interpreted as any computer program regardless if the computer program has the claimed processing method contained in the program or not. For example a computer operating system is a program, regardless if the claimed method is in the operating system, making it possible to implement the processing method of the claimed invention. Thus, the phrase "making it possible to implement" for claims 36-39 ought to be amended to "implementing". Note, see claims 40 and 41 as an example using "implementing".

Response to Arguments

7. Applicant's arguments, see amendment, page 21, filed 2/7/2005, with respect to the rejection(s) of claim 1 under Chang et al. (USP 6,711,297 B1) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Dekel et al. (USP 6,314,452 B1).

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. Claims 1-7,9,11,12 and 14-41 are rejected under 35 U.S.C. 102(e) as being anticipated by Dekel et al. (US Patent 6,314,452 B1).

Regarding claim 30, Dekel et al. discloses a device for decoding (Fig. 1, num. 110: CLIENT COMPUTER is a device for decoding.) a coded digital signal (Fig. 1, num. 110: CLIENT COMPUTER decodes, via the method of fig. 7, num. 704: RECEIVE DATA BLOCKS FROM SERVER AND INSERT TO CACHE, a coded digital signal represented as arrow paths between numerals 110 and 120 of fig. 1.), which has been processed by a device (Fig. 1,num. 120: IMAGING SERVER), for processing a coded digital signal including a set of samples obtained by coding a set of original samples representing physical quantities and a set of information concerning a size w, h of the set of original samples and its resolution res, where said processing device comprises:

a) means for locating a subset of original samples (Fig. 8,num. 802: DECODE ROI REQUEST STREAM is a means for locating a subset or ROI of original samples of fig. 1, num. 122: IMAGE FILE STORAGE using a "request list" in col. 30, line 4.) of given size z_{ulx} , z_{uly} , z_h , z_w and resolution z_{res} (Fig. 8,num. 802: DECODE ROI REQUEST STREAM is a means for locating a subset or ROI of original samples of fig. 1, num. 122: IMAGE FILE STORAGE using a "request list" in col. 30, line 4 of given size using a "rectangle-based procedure" in col. 18, line 60 and "resolution" as shown in the rectangle based procedure equation 1.3 of column 18.) in the set of original samples (Fig. 8,num. 802: DECODE ROI REQUEST STREAM is a means for locating a subset or ROI of original samples of fig. 1, num. 122: IMAGE FILE STORAGE using a "request list" in col. 30, line 4 of given size using a "rectangle-based procedure" in col. 18, line 60 and "resolution" as shown in the rectangle based procedure equation 1.3 of column 18 in the set of original samples of fig. 1, num. 122: IMAGE FILE STORAGE.) according to the set of information (Fig. 8,num. 802: DECODE ROI REQUEST STREAM is a means for locating a subset or ROI of original samples of fig. 1, num. 122: IMAGE FILE STORAGE using a "request list" in col. 30, line 4 of given size using a "rectangle-based procedure" in col. 18, line 60 and "resolution" as shown in the rectangle based procedure equation 1.3 of column 18 in the set of original samples of fig. 1, num. 122: IMAGE FILE STORAGE according to the set of information using a "request list" in col. 30, line 4.)...

... of size w , h and resolution res of this set (Fig. 8, num. 802: DECODE ROI REQUEST STREAM is a means for locating a subset or ROI of original samples of fig. 1, num. 122: IMAGE FILE STORAGE using a "request list" in col. 30, line 4 of given size using a "rectangle-based procedure" in col. 18, line 60 and "resolution" as shown in the rectangle based procedure equation 1.3 of column 18 in the set of original samples of fig. 1, num. 122: IMAGE FILE STORAGE according to the set of information using a "request list" in col. 30, line 4 of size w , h and resolution res as shown by the variables, t_x , t_y and $t_{resolution}$ of equation 1.3 of this request list set.);

b) means for determining (Fig. 8, num. 801: PREPROCESS UNCOMPRESSED IMAGE and shown in more detail in fig. 9 where numeral 904: FORWARD SUBBAND TRANSFORM STEP determines...), amongst coefficients (Fig. 8, num. 801: PREPROCESS UNCOMPRESSED IMAGE and shown in more detail in fig. 9 where numeral 904: FORWARD SUBBAND TRANSFORM STEP determines, amongst coefficients as shown in fig. 20, num 2003.) of a low-frequency sub-band LL_o (Fig. 8, num. 801: PREPROCESS UNCOMPRESSED IMAGE and shown in more detail in fig. 9 where numeral 904: FORWARD SUBBAND TRANSFORM STEP determines, amongst coefficients as shown in fig. 20, num 2003 of a low-frequency sub-band LL_o or ll_j pixels where pixels are "coefficients/pixels" in col. 28, line 21.)...

... of a last decomposition level (Fig. 8, num. 801: PREPROCESS UNCOMPRESSED IMAGE and shown in more detail in fig. 9 where numeral 904: FORWARD SUBBAND TRANSFORM STEP determines, amongst coefficients as shown in fig. 20, num 2003 of a low-frequency sub-band LL_0 or ll_j pixels where pixels are "coefficients/pixels" in col. 28, line 21 of a last decomposition level as shown in fig. 10, label THUMBNAIL RESOLUTION.) obtained by decomposition into frequency sub-bands (Fig. 8, num. 801: PREPROCESS UNCOMPRESSED IMAGE and shown in more detail in fig. 9 where numeral 904: FORWARD SUBBAND TRANSFORM STEP determines, amongst coefficients as shown in fig. 20, num 2003 of a low-frequency sub-band LL_0 or ll_j pixels where pixels are "coefficients/pixels" in col. 28, line 21 of a last decomposition level as shown in fig. 10, label THUMBNAIL RESOLUTION obtained by decomposition as shown in fig. 20, where numeral 2001 is decomposed in to parts as shown in 2003, into frequency sub-bands, ll,hl,ih,hh as shown in fig. 20.) of the set of original samples (Fig. 8, num. 801: PREPROCESS UNCOMPRESSED IMAGE and shown in more detail in fig. 9 where numeral 904: FORWARD SUBBAND TRANSFORM STEP determines, amongst coefficients as shown in fig. 20, num 2003 of a low-frequency sub-band LL_0 or ll_j pixels where pixels are "coefficients/pixels" in col. 28, line 21 of a last decomposition level as shown in fig. 10, label THUMBNAIL RESOLUTION obtained by decomposition as shown in fig. 20, where numeral 2001 is decomposed in to parts as shown in 2003, into frequency sub-bands, ll,hl,ih,hh as shown in fig. 20 of the set of original samples as shown in fig. 1, num. 122: IMAGE STORAGE FILE or 121: IMAGING SERVER CACHE and fig. 10,num. 121: CACHE),...

... the number of coefficients (Fig. 8, num. 801: PREPROCESS UNCOMPRESSED IMAGE and shown in more detail in fig. 9 where numeral 904: FORWARD SUBBAND TRANSFORM STEP determines, amongst coefficients as shown in fig. 20, num 2003 the number of coefficients as shown in fig. 14, step 1403: GROUP STILL TYPE 16 [coefficients]?.) per dimension (Fig. 8, num. 801: PREPROCESS UNCOMPRESSED IMAGE and shown in more detail in fig. 9 where numeral 904: FORWARD SUBBAND TRANSFORM STEP determines, amongst coefficients as shown in fig. 20, num 2003 the number of coefficients as shown in fig. 14, step 1403:GROUP IS STILL TYPE 16 [coefficients]? which corresponds to a dimension of 4 of a 4 X 4 group of coefficients as mentioned in col. 9, lines 64,65 .) of the signal (represented as arrow paths between numerals 110 and 122 of fig. 1) which correspond to the located subset (ROI of original samples of fig. 1, num. 122: IMAGE FILE STORAGE);

c) means for deciding whether or not to modify (Fig. 8, num. 803: ENCODE LOW RESOLUTION DATA OF ROI FROM CACHE uses the process of fig. 14 where step 1405: GROUP IS ZERO? is a means for deciding that modifies.) the size (Fig. 8, num. 803: ENCODE LOW RESOLUTION DATA OF ROI FROM CACHE uses the process of fig. 14 where step 1405: GROUP IS ZERO? is a decision that modifies or "split[s]" in col. 11, line 25 the size of "the group" in col. 11, line 25.)...

... of this located subset (Fig. 8, num. 803: ENCODE LOW RESOLUTION DATA OF ROI FROM CACHE uses the process of fig. 14 where step 1405: GROUP IS ZERO? is a decision that modifies or "split[s]" in col. 11, line 25 the size of "the group" in col. 11, line 25 of the located subset or ROI of original samples of fig. 1, num. 122: IMAGE FILE STORAGE.) according to the determined number of low-frequency sub-band coefficients (Fig. 8, num. 803: ENCODE LOW RESOLUTION DATA OF ROI FROM CACHE uses the process of fig. 14 where step 1405: GROUP IS ZERO? is a decision that modifies or "split[s]" in col. 11, line 25 the size of "the group" in col. 11, line 25 of the located subset or ROI of original samples of fig. 1, num. 122: IMAGE FILE STORAGE according to the claimed determining step of fig. 8, num. 801: PREPROCESS UNCOMPRESSED IMAGE and shown in more detail in fig. 9 where numeral 904: FORWARD SUBBAND TRANSFORM STEP determines, amongst coefficients as shown in fig. 20, num. 2003 the number of coefficients as shown in fig. 14, step 1403: GROUP STILL TYPE 16 [coefficients]?)., said means for deciding (Fig. 14 where step 1405: GROUP IS ZERO? is a means for deciding.) being adapted to make a decision with regard to a modification of the size (Fig. 14 where step 1405: GROUP IS ZERO? is a means for deciding being adapted to make a decision with regard to a modification or "split" in col. 11, line 25 of the size or "the group" in col. 11, line 25.) of the located subset (Fig. 14 where step 1405: GROUP IS ZERO? is a means for deciding being adapted to make a decision with regard to a modification or "split" in col. 11, line 25 of the size or "the group" in col. 11, line 25 of the located subset or ROI of original samples of fig. 1, num. 122: IMAGE FILE STORAGE.)...

...before said decoding device operates (Fig. 8, num. 803: ENCODE LOW RESOLUTION DATA OF ROI FROM CACHE uses the process of Fig. 14 where step 1405: GROUP IS ZERO? is a means in the device of fig. 1, num. 120: IMAGING SERVER for deciding being adapted to make a decision with regard to a modification or “split” in col. 11, line 25 of the size or “the group” in col. 11, line 25 of the located subset or ROI of original samples of fig. 1, num. 122: IMAGE FILE STORAGE before said decoding device of fig. 1, num. 110: CLIENT COMPUTER operates because fig. 14, step 1405: GROUP IS ZERO? corresponds to the section 4 of column 8: The Progressive Subband Coding Algorithm which creates a code that will be decoded by said decoding device of fig. 1, num. 110: CLIENT COMPUTER.), and said decoding device (Fig. 1, num. 110: CLIENT COMPUTER) comprises:

d) means for extracting samples (Fig. 1, num. 110 CLIENT COMPUTER includes a means for extracting samples as shown in fig. 22, num. 2101: CACHE EXTRACTION.) from the coded digital signal corresponding to the located subset of original samples having a size which has possibly been modified;

e) means for entropic decoding (Fig. 1, num. 110 CLIENT COMPUTER includes a means for entropic decoding as shown in fig. 22, num. 2101: PROGRESSIVE DECODING.) of these samples;

f) means of dequantization (Fig. 1, num. 110 CLIENT COMPUTER includes a means of dequantization as shown in fig. 22, num. 2102: INVERSE SUBBAND TRANSFORM. Note that dequantization is included in the process of the inverse subband transform.) of the previously decoded samples;

g) means of reverse transformation (Fig.1, num. 110 CLIENT COMPUTER includes a means of reverse transformation as shown in fig. 22, num. 2102: INVERSE SUBBAND TRANSFORM) of the decomposition into frequency sub-bands on the previously dequantized samples; and

h) means of restoration (Fig.1, num. 110 CLIENT COMPUTER includes a means of restoration as shown in fig. 22, num. 2104: IMAGE RESIZE) of the located subset of samples.

Regarding claim 31, Dekel et al. discloses the device according to claim 30, wherein said means for extracting (Fig. 1, num. 110 CLIENT COMPUTER includes a means for extracting samples as shown in fig. 22,num. 2101: CACHE EXTRACTION.) extract from the digital signal (Fig. 1, num. 110 CLIENT COMPUTER includes a means for extracting samples as shown in fig. 22,num. 2101: CACHE EXTRACTION extract from the digital signal represented as arrow paths between numerals 110 and 120 of fig. 1.) the blocks of samples (Fig. 1, num. 110 CLIENT COMPUTER includes a means for extracting samples as shown in fig. 22,num. 2101: CACHE EXTRACTION extract from the digital signal represented as arrow paths between numerals 110 and 120 of fig. 1 sample blocks as shown in fig. 21, num. 2150.) corresponding to the located subset of original samples having a size which has possibly been modified.

Regarding claim 35, Dekel et al. discloses the device according to claim 30, wherein said extracting, entropic decoding, dequantization, reverse transformation, and restoration means are incorporated in:

a) a microprocessor (Fig. 1,num. 110: CLIENT COMPUTER).

Claim 20 is rejected the same as claim 30. Thus, argument similar to that presented above for claim 30 is equally applicable to claim 20.

Regarding claim 21, Dekel et al. discloses the device according to claim 20, in which said decision means (Fig. 8, num. 803: ENCODE LOW RESOLUTION DATA OF ROI FROM CACHE uses the process of fig. 14 where step 1405: GROUP is ZERO? is a means for deciding.) take into account at least one predetermined criterion representing a level of quality (Fig. 8, num. 803: ENCODE LOW RESOLUTION DATA OF ROI FROM CACHE uses the process of fig. 14 where step 1405: GROUP is ZERO? is a means for deciding that takes into account at least parameter, "view quality" in TABLE 5 of column 15.) required for the restoration of the subset of original samples of the digital signal.

Regarding claim 22, Dekel et al. discloses the device according to claim 20, in which said means for deciding take into account at least one predetermined criterion ("quality parameter" in col. 16, lines 7,8) representing a compromise between a level of quality ("lower quality" in col. 16, line 8) required for the restoration of the subset of original samples and a speed of processing ("transfer size" in col. 16, line 4 hence speed process of transferring "can be reduced" in col. 16, line 8.) for restoring the subset of original samples.

Regarding claim 23, Dekel et al. discloses the device according to claim 20, further comprising means (Fig. 14, num 1406 is a means.) for modifying the size (Fig. 14, num 1406: 2. INITIALIZE LOOP IN FOUR TYPE4 SUBGROUPS is a means for modifying or splitting the size or group into subgroups.) of the located subset of original samples.

Regarding claim 24, Dekel et al. discloses the device according to claim 23, wherein said means for modifying (Fig. 14, num 1406: 2. INITIALIZE LOOP IN FOUR TYPE4 SUBGROUPS is a means for modifying or splitting the size or group into subgroups.) comprise

a) means (Fig. 8, step 801: PREPROCESS UNCOMPRESSED IMAGE is a means) of increasing the size (Fig. 8, step 801: PREPROCESS UNCOMPRESSED IMAGE is a means of increasing the size or "padding" in col. 25, line 59.) of the subset of original samples.

Regarding claim 25, Dekel et al. discloses the device according to claim 23, wherein said means for modifying (Fig. 14, num 1406: 2. INITIALIZE LOOP IN FOUR TYPE4 SUBGROUPS is a means for modifying or splitting the size or group into subgroups.) comprise

a) means (Fig. 9, num. 904: FORWARD SUBBAND TRANSFORM is a means.) of reducing the size (Fig. 9, num. 904: FORWARD SUBBAND TRANSFORM is a means of reducing the size or "removal" of...coefficients" in col. 29, lines 39,40 of "a padded portion" in col. 29, line 37.) of the subset.

Regarding claim 26, Dekel et al. discloses the device according to claim 20, wherein said means for deciding (Fig. 8, num. 803: ENCODE LOW RESOLUTION DATA OF ROI FROM CACHE uses the process of fig. 14 where step 1405: GROUP is ZERO? is a means for deciding.) lead to a preservation of the size (Fig. 8, num. 803: ENCODE LOW RESOLUTION DATA OF ROI FROM CACHE uses the process of fig. 14 where step 1405: GROUP is ZERO? is a means for deciding lead to a preservation of the size via a "scroll" in col. 15, line 19 operation.) of the located subset of original samples.

Regarding claim 27, Dekel et al. discloses the device according to claim 20, further comprising:

a) means of increasing the size (Fig. 7, num. 701: RECEIVE FROM GUI VIEW PARAMETERS OF NEW ROI increases the size using a "scale" in col. 15, TABLE 5 parameter.) of the located subset of original samples (Fig. 7, num. 701: RECEIVE FROM GUI VIEW PARAMETERS OF NEW ROI increases the size using a "scale" in col. 15, TABLE 5 parameter of the located subset or ROI of original samples of fig. 1, num. 122: IMAGE FILE STORAGE using a "request list" in col. 30, line 4.)...

...which do not modify the number of coefficients of the low-frequency sub-band corresponding to the subset (Fig. 7, num. 701: RECEIVE FROM GUI VIEW PARAMETERS OF NEW ROI increases the size using a "scale" in col. 15, TABLE 5 parameter and shown in fig. 10 of the located subset or ROI of original samples of fig. 1, num. 122: IMAGE FILE STORAGE or fig. 10, label: THUMBNAIL RSOLUTION using a "request list" in col. 30, line 4 which do not modify the number of coefficients of the low-frequency sub-band because the claimed sub-band or "sub-tiles... contains... 32^2 coefficients [which is a feature shared by both the server and client as mentioned in col. 5, lines 24,25] (col. 6, lines 11,12)...at the time of rendering [or scaling] at the client (col. 6, line 13)".).

Regarding claim 28, Dekel et al. discloses the device according to claim 20 wherein the set of original samples (Fig. 10, num. 121: CACHE is the set of original samples.) of the digital signal is separated into several zones $T_1...T_{15}$ (Fig. 10, num. 121: CACHE is the set of original samples that is separated into several zones or MEMORY STRIPS as shown in fig. 18.) which have each independently undergone a decomposition (Fig. 10, num. 121: CACHE is the set of original samples that is separated into several zones or MEMORY STRIPS as shown in fig. 18 which have independently undergone a decomposition as shown in fig. 21, num 2150 shows remnants, ll,lh,hl,hh of a decomposition of fig. 10.). Note that the remaining portion of claim 28 is similar to claim 20. Thus, Claim 28 is rejected the same as claim 20. Thus, argument similar to that presented above for claim 20 is equally applicable to claim 28 except for the above mentioned limitation.

Regarding claim 29, Dekel et al. discloses the device according to claim 20, wherein the coded digital signal (The coded digital signal represented as arrow paths between numerals 110 and 120 of fig. 1.) includes blocks of samples (The coded digital signal represented as arrow paths between numerals 110 and 120 of fig. 1 includes blocks of samples as shown in fig. 3, num. 301.) which have been coded independently (The coded digital signal represented as arrow paths between numerals 110 and 120 of fig. 1 includes blocks of samples in the upper left corner as shown in fig. 3, num. 301 which have been coded via COEFFICIENT ABSOLUTE SIZE as shown in fig. 5 independently from other blocks, upper right and lower right blocks of fig. 5.).

Regarding claim 32, Dekel et al. discloses the device according to claim 20, adapted to process:

- a) a digital signal which is an image signal (The device of fig. 1 is adapted to process the coded digital signal represented as arrow paths between numerals 110 and 120 of fig. 1 which is an image signal.),
- b) the samples of the image (The device of fig. 1 is adapted to process the samples as shown in fig. 5.) being arranged to constitute the rows and columns of the image (The device of fig. 1 is adapted to process the samples as shown in fig. 5 being arranged to constitute the rows and columns of the image using "x" and "y" values 501 and 502, respectively, of fig. 5.).

Claims 1, 3, 16 and 19 are rejected the same as claim 30. Thus, argument similar to that presented above for claim 30 of a device is equally applicable to claims 1,3,16 and 19 of a method.

Regarding claim 2, Dekel et al. discloses the method according to claim 1, which said determining, obtaining, and deciding steps are effected on reception of a request (fig. 8, num. 802: DECODE ROI REQUEST STREAM is a step where a server receives a request which causes said determining, obtaining, and deciding steps.) to obtain the part of the coded digital signal.

Claims 4-7,9,11,12,14 and 15 are rejected the same as claims 21-29, respectively. Thus, argument similar to that presented above for claims 21-29 is equally applicable to claims 4-7,9,11,12,14 and 15, respectively.

Claims 17 is rejected the same as claim 31. Thus, argument similar to that presented above for claim 31 is equally applicable to claim 17.

Claim 18 is rejected the same as claim 32. Thus, argument similar to that presented above for claim 32 is equally applicable to claim 18.

Claims 33 and 34 are rejected the same as claim 35. Thus, argument similar to that presented above for claim 35 is equally applicable to claims 33 and 34.

Regarding claim 37, Dekel et al. discloses means for storing information (Fig. 1, num. 111: IMAGING CACHE) which can be read by a computer or a microprocessor storing instructions of a computer program making it possible to implement the decoding method according to claim 16.

Claims 39 and 41 are rejected the same as claim 37. Thus, argument similar to that presented above for claim 37 is equally applicable to claims 39 and 41.

Claims 36,38 and 40 are rejected the same as claim 37. Thus, argument similar to that presented above for claim 37 is equally applicable to claims 36,38 and 40.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 8, 10 and 13 rejected under 35 U.S.C. 103(a) as being unpatentable over Dekel et al. (US Patent 6,314,452 B1) in view of Chang et al. (US Patent 6,711,297 B1).

Regarding claim 8, Dekel et al. does not directly teach the limitations of claim 8, but does suggest moving a boundary of a subset that increases in size as shown in fig. 10, label: JUMP on the right bottom side.

Cheng et al. does teach moving a boundary of a subset, fig. 6A, num. 700 which is a 512 X 512 block, that increases in size as shown in fig. 6B, numerals 700-770 and teaches claim 8 in which by representing, in a space of dimensions (The table in column 10 has dimensions in the x and y directions.) corresponding to the dimensions of the digital signal (The dimensions in the x and y directions correspond to blocks that are requested as shown in fig. 6B and mentioned in col. 10, lines 49-60.), a position of the coefficients (Fig. 6B, num. 700 is a rectangle of coefficients as mentioned in col. 11, lines 33-38.) of the low-frequency sub-band of the last decomposition level (Fig. 6B, num. 700 corresponds to the Low Low (Level 2) band as shown in figure 2E) and a position of the subset (Fig. 6B, num. 700 is a subset with position denoted by using a coordinate system shown fig. 2A with origin (0,0).)...

...of original samples (Fig. 6B has an original image or Source Image 2K X 2K that contains the sub-set.) delimited by a boundary (The subset 700 has a square boundary.), the increase in the size (A request step increases the size of the 512 X 512 image of figure 5A shown in figure 6B as numeral 700 to a size of 1K X 1K as shown by the blocks 700,750,770 and 760.) of the subset (The block 700 of figure 6B,num. 130 is a subset of original samples that correspond to the cursor to request an image portion.) consists of moving the boundary (The boundary of figure 6B,num. 700 has a rectangular boundary that is increased in size to the boundary made by the images of numerals 700,750,770 and 760.) so as to add to the subset (Fig. 6B,num. 700) at least one coefficient (The image of fig. 6B,num. 750 shares an edge of coefficients with the image of 700) of the low-frequency sub-band (Fig. 6B. num. 700 is the low frequency sub-band.) per dimension (The image of fig. 700 has two dimensions.) of the digital signal (Fig. 1, num. 130:pyramidal Data Structure is sub-band coding as mentioned in col. 8, lines 56-64.),the at least one added coefficient (The image of fig. 6B,num. 750 shares an edge of coefficients with the image of 700) being situated close (The right hand edge of fig. 6B,num. 700 shares the same edge as the left hand boundary of the image of fig. 6B, num. 750) to the boundary (The boundary of figure 6B,num. 700 has a rectangular boundary that is increased in size to the boundary made by the images of numerals 700,750,770 and 760.) before the movement thereof (The boundary of fig. 6B, num. 700 originally had a small boundary, once a change in boundaries occurred the coefficients on the left hand side of fig. 750,which are the same coefficients as the coefficients of 700, changes the boundary of the image of 700 to eventually generate a larger

image, 700, 750, 770 and 760, using the other images 770 and 760.)

It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify Dekel et al.'s teaching of JUMP of fig. 10 with Cheng et al.'s teaching of figures 6A and 6B, because Cheng et al.'s teaching "...eliminates unnecessary transfer of data...(col. 11, line 4)" and because both references are directed to similar types of compression.

Claim 10 is similar to claim 8, except for requiring an opposite operation of claim 9 which Chang et al. uses a zoom factor to zoom in or out.

Claim 13 are rejected the same as claim 8. Thus, argument similar to that presented above for claim 8 is equally applicable to claim 13.

Conclusion

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

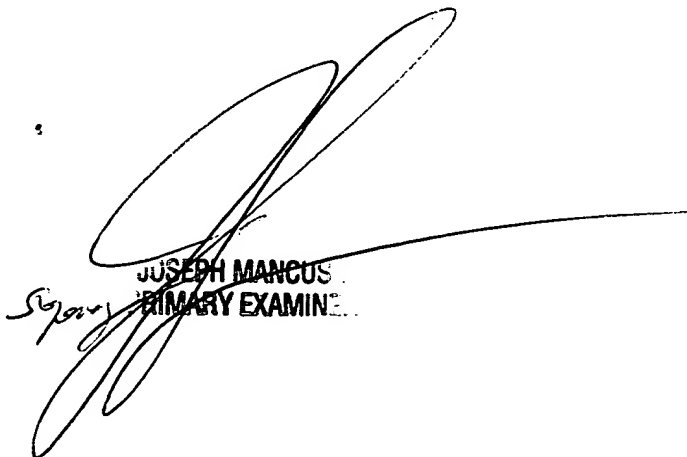
the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dennis Rosario whose telephone number is (571) 272-7397. The examiner can normally be reached on 6-3.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Mancuso can be reached on (571) 272-7695. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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